Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Completed by: Ali Imam

GENERAL INFORMATION:

Name:	Celanese, Ltd.
Address:	408 North Main Street, P.O. Box 970 Calvert City, Kentucky 42029
Date application received:	May 2, 2003
SIC/Source description:	2821 Industrial Chemicals
AFS(10-digit) Plant ID:	21-157-00055
Application log number:	55706
Permit number:	VF-03-001

APPLICATION TYPE/PERMIT ACTIVITY:

[ ] Initial issuance
[X] Permit modification
__Administrative
__Minor
X Significant
[ ] Permit renewal
[ ] General permit
[ ] Conditional major
[ ] Title V
[ ] Synthetic minor
[ ] Operating
[X] Construction/operating

COMPLIANCE SUMMARY:

[ ] Source is out of compliance
[ ]Compliance certification signed
[ ] Compliance schedule included

APPLICABLE REQUIREMENTS LIST:

[ ] NSR [ ] NSPS [X] SIP
[ ] PSD [ ] NESHAPS [ ] Other
[ ] Netted out of PSD/NSR [ ] Not major modification per 401 KAR 51:017, 1(23)(b) or 51:052,1(14)(b)

MISCELLANEOUS:

[ ] Acid rain source
[ ] Source subject to 112(r)
[ ] Source applied for federally enforceable emissions cap
[ ] Source provided terms for alternative operating scenarios
[ ] Source subject to a MACT standard
[ ] Source requested case-by-case 112(g) or (j) determination
[ ] Application proposes new control technology
[X]Certified by responsible official
[X]Diagrams or drawings included
[ ] Confidential business information (CBI) submitted in application
[ ] Pollution Prevention Measures
[ ] Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM	1.25	1.25
SO_2	-	-
NOx	-	-
CO	-	-
VOC	14.72	14.72
LEAD	-	-
HAP ≥ 10 tpy (by CAS)		
Methanol	14.72	14.72

SOURCE PROCESS DESCRIPTION:

Celanese, Ltd. manufactures industrial chemicals. A brief description of the manufacturing process follows:

The source produces polyvinyl alcohol (PVOH) using vinyl acetate, methanol, sodium hydroxide, and a peroxide catalyst. Acetic acid is produced as a byproduct. The PVOH plant is divided into sections described below.

i. Polymerization (Poly) Area: Vinyl acetate is continuously polymerized to polyvinyl acetate. The reaction uses methanol and various peroxide compounds.
ii. Tank Farm: The area consists of approximately 30 tanks that hold the raw materials and intermediate process streams.
iii. Saponification (SAP) Area: Polyvinyl acetate is converted to polyvinyl alcohol using sodium hydroxide as a catalyst.
iv. Wedco Area: This area dry grinds the final product.
v. Filling Area: The product is stored in a series of silos and bagged.
vi. Acetic Acid Recovery (AAR) Unit: The mother liquor (mixture of methanol and methyl acetate) from the SAP area is sent to this unit. Here the methanol is extracted and recycled. Methyl acetate is converted to acetic acid in ion exchange beds. The acetic acid is then separated, de-watered, and sent out as final product.

Significant Revision, Log No. 55706

This permit application is for the installation of two (2) new truck bulk loading stations and modification of Emission Point No. W33 (063) Bagging Operation to accommodate filling bulk bags instead of fifty (50) pound bags at the Celanese – Calvert City facility. The new loading stations are The North Bulk Truck Station EPN W37 (067) and The South Bulk Truck Station EPN W38 (068). The North Bulk Truck Station will accommodate loading from the finished product silos 1 through 4 and the existing bagging hopper. The South Bulk Truck Station will accommodate loading from the finished product silos 15 through 17.